

#2902 Store at -20°C

ASF1B (C70E2) Rabbit mAb



✓ 100 µl
(10 western blots)

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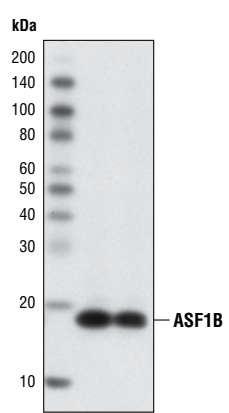
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, Mk	19 kDa	Rabbit IgG**

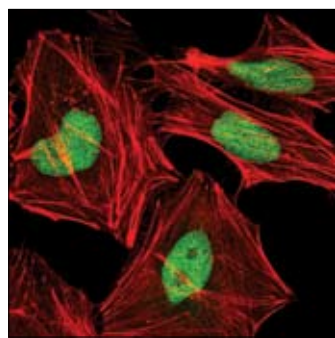
Background: ASF1 was first identified in *S. cerevisiae* based on its ability to de-repress transcriptional silencing when overexpressed (1). While only one gene exists in yeast and *Drosophila*, mammalian cells contain the two highly homologous ASF1A and ASF1B genes (2). ASF1A and ASF1B function as histone chaperones, delivering histone H3/H4 dimers to CAF-1 or HIRA histone deposition complexes to facilitate replication-coupled and replication-independent nucleosome assembly on DNA (2-5). Both ASF1A and ASF1B bind to CAF-1, but only ASF1A binds to HIRA (5). In addition to playing a role in DNA replication and gene silencing, ASF1 functions in DNA damage repair, genome stability and cellular senescence. Deletion of ASF1 in yeast and *Drosophila* confers sensitivity to various DNA damaging agents and inhibitors of DNA replication, increases genomic instability and sister chromatid exchange, and activates the DNA damage checkpoint (6-8). Depletion of both ASF1A and ASF1B in mammalian cells results in the accumulation of cells in S phase, increased phosphorylation of H2A.X, centrosome amplification and apoptosis (9,10). ASF1A is required for the formation of senescence-associated heterochromatin foci (SAHF), with overexpression of ASF1A inducing senescence in primary cells (4). Both ASF1A and ASF1B are phosphorylated in S phase by the Tousled-like kinases TLK1 and TLK2, and are dephosphorylated when TLK1 and TLK2 are inactivated by Chk1 kinase in response to replicative stress (11,12). The function of ASF1 phosphorylation is not yet understood.

Specificity/Sensitivity: ASF1B (C70E2) Rabbit mAb detects endogenous levels of total ASF1B protein. The antibody does not cross-react with ASF1A protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the carboxy-terminus of the human ASF1B protein.



Western blot analysis of extracts from HeLa and HCT116 cells using ASF1B (C70E2) Rabbit mAb.



Confocal immunofluorescent analysis of HeLa cells using ASF1B (C70E2) Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red).

Entrez-Gene ID #55723
Swiss-Prot Acc. #Q53G51

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:100

Background References:

- (1) Singer, M.S. et al. (1998) *Genetics* 150, 613-632.
- (2) Mousson, F. et al. (2006) *Chromosoma* 116, 79-93.
- (3) Tang, Y. et al. (2006) *Nat. Struct. Mol. Biol.* 13, 921-929.
- (4) Zhang, R. et al. (2005) *Dev. Cell.* 8, 19-30.
- (5) Daganzo, S.M. et al. (2003) *Curr. Biol.* 13, 2148-2158.
- (6) Ramey, C.J. et al. (2004) *Mol. Cell. Biol.* 24, 10313-10327.
- (7) Prado, F. et al. (2004) *EMBO Rep.* 5, 497-502.
- (8) Tyler, J.K. et al. (1999) *Nature* 402, 555-560.
- (9) Sanematsu, F. et al. (2006) *J. Biol. Chem.* 281, 13817-13827.
- (10) Groth, A. et al. (2005) *Mol. Cell.* 17, 301-311.
- (11) Silljé, H.H. and Nigg, E.A. (2001) *Curr. Biol.* 11, 1068-1073.
- (12) Carrera, P. et al. (2003) *Genes Dev.* 17, 2578-2590.

For application specific protocols please see the web page for this product at www.cellsignal.com.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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